

NEW SPECIES OF TORTRICID MOTHS FROM EASTERN  
NORTH AMERICA (LEPIDOPTERA: TORTRICIDAE)

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*Abstract.*—*Sparganothis lamberti*, *Lozotaenia costinotana*, *Lozotaenia exomilana*, and *Archips nigriplagana*, four new species of Tortricidae, are described from eastern North America.

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When I gave my collection of microlepidoptera to the United States National Museum of Natural History a few years ago, there were among the undescribed species four species of tortricids for which I had prepared descriptions. At that time no species of *Lozotaenia* in its correct sense had been recorded from North America, and until now none has been recorded from eastern North America. Recently I was asked by J. F. Gates Clarke to publish the description of the *Sparganothis* species; we decided that it was advisable that all four species be described so all the specimens of the species could be released to the collection.

*Sparganothis lamberti* Franclemont, NEW SPECIES

Figs. 1, 2, 8, 9

A moderate-sized, very brilliantly colored and distinctive appearing tortricine; superficially it shows a vague resemblance to *S. irrorea* (Robinson), but it lacks any evidence of the transverse striae of that species. The genitalia associate the species with *S. pettitana* (Robinson) from which it differs in both pattern and wing texture.

Description: Male.—Costal fold of fore wing short, only slightly more than one-ninth length of costa. Inner margin of hind wing modified to form a pocket containing a hair pencil. Palpi, head, collar (patagia), and bases of tegulae dark, glistening brown with some iridescent reflections; disc of thorax and apical halves of tegulae bright golden yellow. Fore and middle legs deep brown on outer sides, inner sides golden white. Fore wing with ground color clear, bright, golden yellow, concolorous with disc of thorax; no striae nor reticulate markings; costal fold dark, shining brown, concolorous with head and collar, followed by triangular costal spot of same color; large quadrate brown patch, beginning just beyond middle of inner margin, extending half-way to outer angle, and extending costad to lower margin of discal cell; dark brown, punctiform spot at end of cell above outer part of dark patch; dark brown subterminal band, well marked toward costa, evanescent below middle of wing; broad marginal band of golden brown scales; pale golden brown shade from subterminal band to quadrate patch, upper boundary diagonal from below apex to quadrate patch, covering outer fourth of wing; fringe dark; a few dark brown scales on inner margin at base. Hind wing uniformly

pale golden brown; dorsum of abdomen concolorous. Beneath, fore wing golden brown, paler along costa; hind wing paler golden brown; venter of abdomen pale, concolorous with hind wing.

Female.—Palpi, head, collar, and bases of tegulae as in male, glistening dark brown; disc of thorax and apical halves of tegulae deep golden yellow. Legs as in male. Fore wing ground color deep golden yellow; base of costal margin dark brown; dark, triangular costal spot of male absent; dark quadrate patch along inner margin and dark subterminal area obscured in dark golden brown shade, upper margin diagonal from just before apex to middle of inner margin; some dark transverse striae in shaded area; dark punctiform spot about one-third from base, second such spot, in most specimens, at end of discal cell, in same position as that in male. Hind wing uniformly golden brown; dorsum of abdomen concolorous. Beneath as in male.

Fore wing length: Male, 19–20 mm, female 21–23 mm.

Male genitalia: Fig. 1; similar to *pettitana*, but slightly smaller and with spiculate area on transtilla broader and more rounded.

Female genitalia: Fig. 2.

Holotype ♂. Cherry Hill Recreation Area, Route 107, 2000 ft., Oconee County, South Carolina, 22 August 1958; J. Franclemont. Genitalia slide JGF 4073. United States National Museum of Natural History collection.

Paratypes: 54 ♂, 50 ♀. 48 ♂ and 48 ♀, same locality as holotype, 7 August to 7 September 1958; 6 ♂, 2 ♀, Highlands 3865 ft., Macon County, North Carolina, 19 July to 24 August 1958, J. G. Franclemont. Most in the collection of the United States National Museum of Natural History.

In addition to the type series the species has been seen from Louisiana, four males taken by V. A. Brou 4.2 miles NE of Abita Springs, St. Tammany Parish.

This species is dedicated to the late Robert Lambert who completed a preliminary revision of the genus *Sparganothis* for his doctoral dissertation at Cornell University.

### *Lozotaenia costinotana* Franclemont, NEW SPECIES

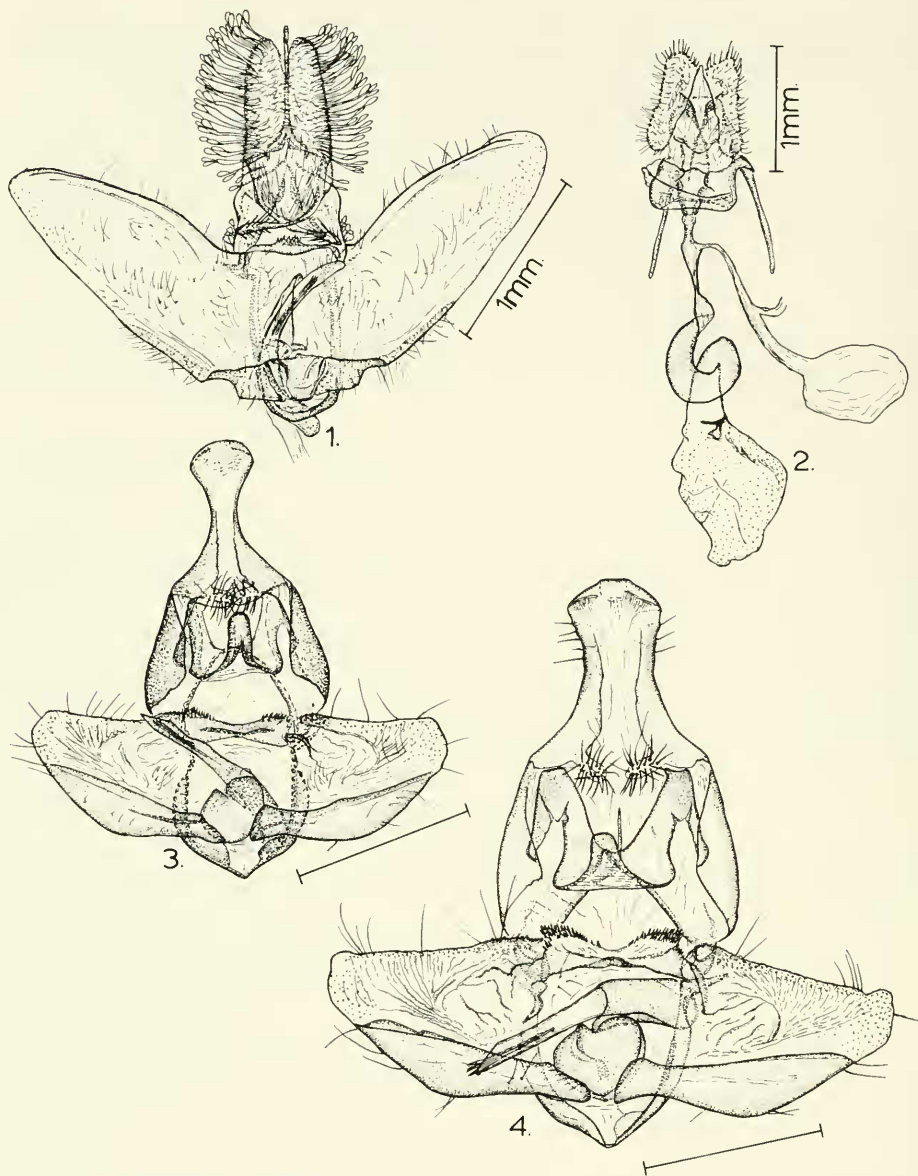
Figs. 3, 13

A species of moderate size with a wing expanse of 19 mm, it differs from both *exomilana* Franclemont and *hesperia* Powell (1962, p. 841) by its smaller size and pattern. It appears most like *rindgei* Obraztsov (1962, p. 17) in pattern, but it is readily distinguished by the male genitalia; *rindgei* has a broad, parallel-sided uncus with a more or less truncate apex, a striking contrast to the spoon-shaped uncus of *costinotana*.

Description: Palpi, head, and thorax gray brown; tegulae pale tipped. Legs fuscous brown on outer sides, whitish on inner sides. Fore wing gray white, whitest along costa and outer margin; disc slightly infuscate, darker toward base; pattern of closely spaced, narrow, irregular, blackish-brown transverse lines, giving a somewhat reticulate appearance; black, subquadrate costal spot at basal third of wing; a smaller somewhat similar spot, but with some white scales centrally, at outer fourth. Hind wing white, slightly infuscate; inner margin and apical area with brownish-black scales. Abdomen whitish above, fuscous brown below.

Fore wing length: 9.5 mm.

Male genitalia: Fig. 3.



Figs. 1-4. *Sparganothis lamberti*. 1, Male genitalia. 2, Female genitalia. 3, *Lozotaenia costinotana*, male genitalia. 4, *Lozotaenia exomilana*, male genitalia.

Holotype ♂. Passadumkeag, Penobscot County, Maine, 30 June 1956; J. G. Franclemont. Genitalia slide JGF 4474. United States National Museum of Natural History collection.

***Lozotaenia exomilana* Franclemont, NEW SPECIES**

Figs. 6, 7, 12

A moderately large tortricine with a wing expanse of 23 to 26 mm that is very similar to *forsterana* (Fabricius) of Europe, but with white scales along the costal

area and the outer margin, and with a conspicuous median shade on the fore wing. The male genitalia differ from those of *forsterana* by the more massive uncus and the shape of the valves; from the somewhat similar *hesperia* they differ in the same characters and in the same way. The elongate, yellowish hair-pencil in a groove between the procoxa and the mesocoxa that was mentioned in the description of *hesperia* is present in *exomilana*; it is apparently absent in *costinotana*.

Description: Palpi, head, and thorax deep fuscous brown. Legs dark fuscous brown on outer sides, grayish white on inner sides. Fore wing pale gray brown with considerable amount of white along costa and outer fourth of wing, giving a silvery appearance; pattern of closely spaced, fine irregular, brownish-black transverse lines, giving a somewhat reticulate appearance; conspicuous, subquadrate black spot at basal third of costa, a triangular black spot at outer fourth of costa; prominent blackish-brown shade from below outer angle of basal costal spot to inner margin, reaching from outer two-thirds to almost outer angle. Hind wing pale fuscous gray, darker at apex and along outer and inner margins. Abdomen above grayish white, below dark fuscous brown.

Expanse of fore wing: 11–13 mm.

Male genitalia: Fig. 4.

Female genitalia: Fig. 5.

Holotype ♂. Highlands 3865 ft., Macon County, North Carolina, 11 July 1958; J. G. Franclemont. Genitalia slide JGF 4473. United States National Museum of Natural History collection.

Paratypes: 2 ♂: same locality as holotype, 24 June 1958, and 11 July 1958; 1 ♀: same locality as holotype, 1 July 1958; J. G. Franclemont. United States National Museum of Natural History collection.

One of the paratypes, the male taken on 11 July, shows a large amount of brownish suffusion on the fore wings, thus obscuring most of the other markings.

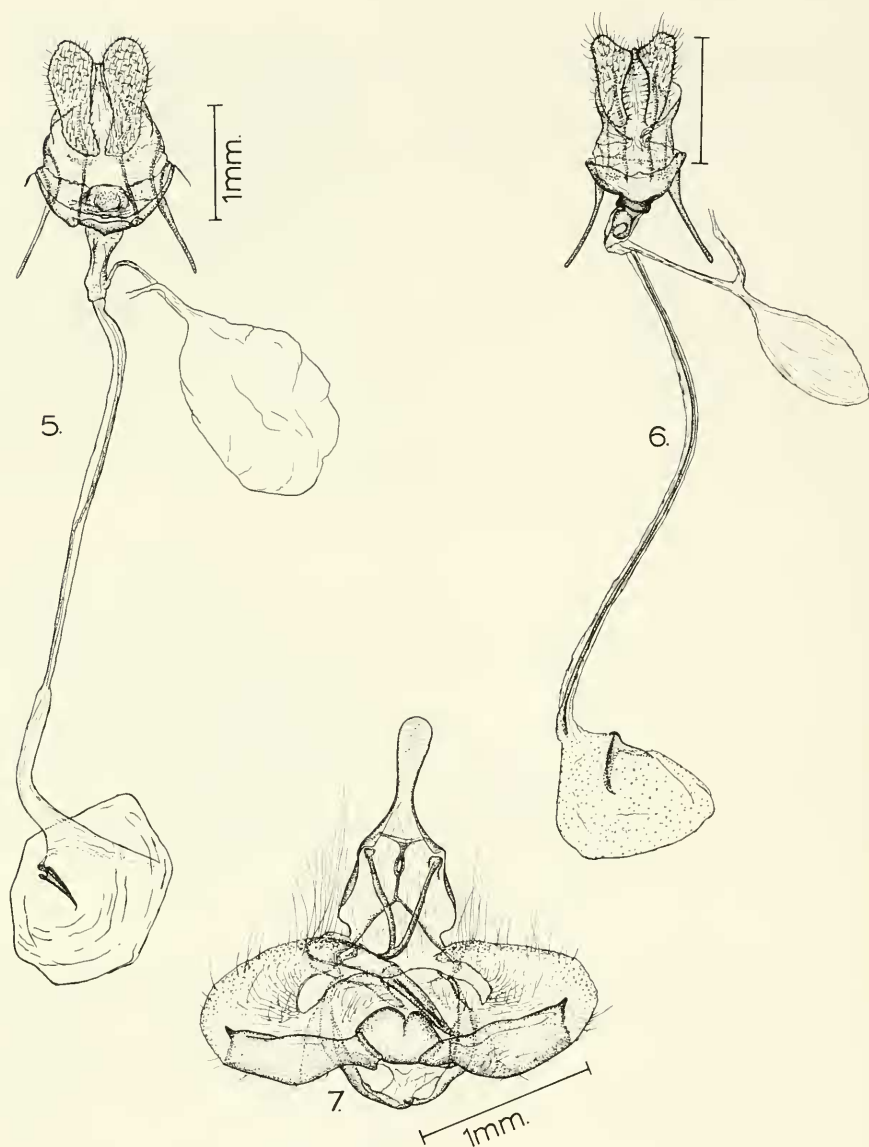
### *Archips nigriplagana* Franclemont, NEW SPECIES

Figs. 6, 7, 10, 11

A very distinctive appearing species of moderate size, the male has a wing expanse of 19 mm and the female 23 mm; the species is perhaps suggestive of *Choristoneura fractivittana* (Clemens), but it is closely related to *Archips arhyrospila* (Walker) by the characters of the male and the female genitalia. The females differ from those of *arygrospila* by the slightly excavated costal and outer margins of the fore wing, agreeing in these characters with *Archips mortuana* Kearfott.

Although the specimens are from two widely separated areas, New York and North Carolina-Kentucky, the specimens from North Carolina and New York were collected in similar habitats, acid soil areas in the Upper Transition Zone. It is the widely separated localities where the moths have been taken that have suggested that we may be concerned with a discrete species.

Description: Male.—Costal fold well developed, extending one-third length of costa of fore wing. Head, thorax, and ground color of fore wing yellow tawny; fore wing with some narrow, irregular, darker transverse bands and two small dark spots in basal area; wide, black band from center of costa, outwardly oblique, turning abruptly toward outer margin in fold, followed by patch of lead-gray scales reaching almost to outer angle, with some scattered dark scales below fold to inner margin; dark, subtriangular costal spot at outer fourth; subterminal area without evident markings; fringe concolorous with ground. Hind wing light gray on base



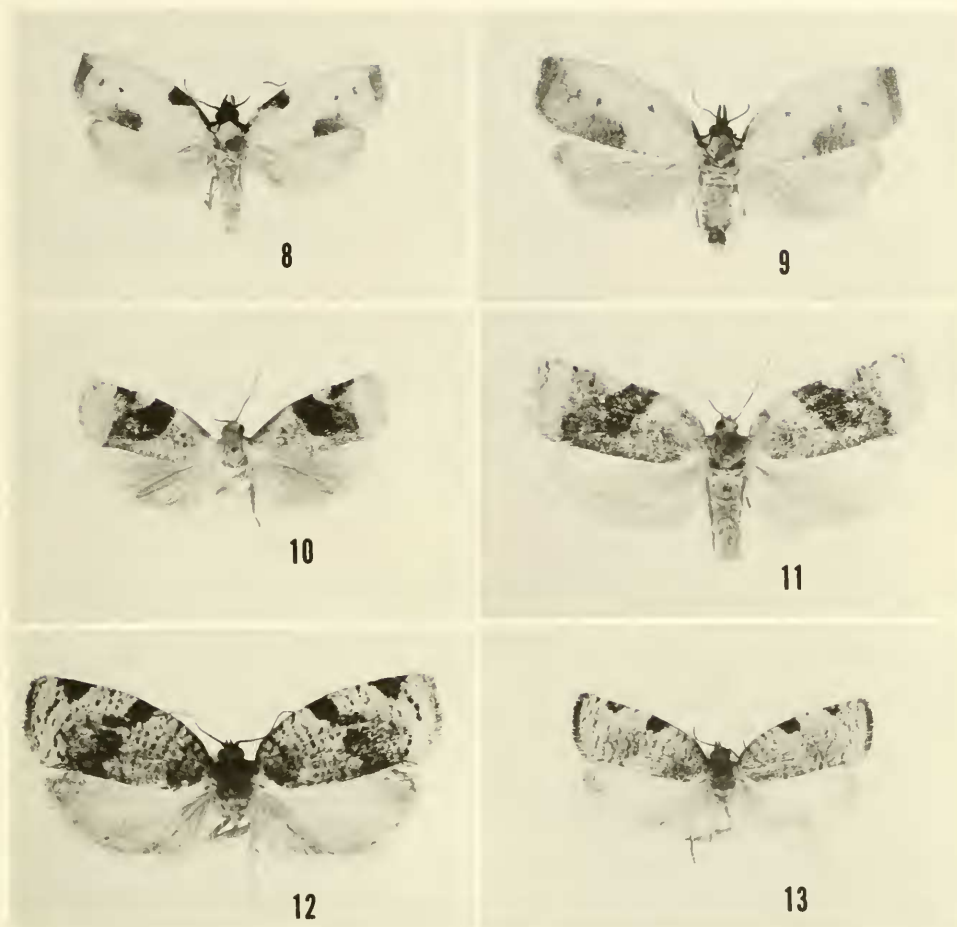
Figs. 5-7. 5, *Lozotaenia exomilana*, female genitalia. *Archips nigriplagana*. 6, Female genitalia. 7, Male genitalia.

and disc; upper half of outer margin and apical margin as well as accompanying fringe light straw color. Beneath pale, with ghost of markings above. Fore and middle legs tawny on outer sides, light straw color on inner sides; hind legs light straw color on both inner and outer sides.

Length of fore wing: 9 mm.

Female.—Similar to male in color and markings, but the darker colors less intense, appearing washed-out; hind wing noticeably paler, darker area smaller in proportion to the total area, pale areas almost white.

Fore wing length: 11 mm.



Figs. 8–13. *Sparganothis lamberti*. 8, Male. 9, Female. *Archips nigriplagana*. 10, Male. 11, Female. 12, *Lozotaenia exomilana*, male. 13, *Lozotaenia costinotana*, male.

Male genitalia: Fig. 7; similar to *argyrospila* but differing in the narrower and longer sclerotized ventral area of the valve. Comparison may be made with the figure in Freeman, 1958 (fig. 16).

Female genitalia: Fig. 6; similar to *argyrospila*, but ovipositor lobes narrowing more toward base; the figure in Freeman, 1958 (fig. 65) may be compared for the differences.

Holotype ♂. McLean Bogs Reserve, Tompkins County, New York, 2 July 1953; J. G. Franclemont. Genitalia slide JGF 4475. United States National Museum of Natural History collection.

Paratypes: 1 ♂ and 3 ♀: Snyder Heights 1100 ft., Ithaca, Tompkins County, New York, 10 July 1979; J. G. Franclemont (♀). Highlands 3865 ft., Macon County, North Carolina, 11 July 1958; J. G. Franclemont (♀). United States National Museum of Natural History collection. Owsley County, Kentucky, 3 miles NE Booneville, 14 June 1980; Loran D. Gibson (♂). Pine Mountain State Park, Kentucky, 6-9-1981 [9 June 1981?]; Carl Cornett (♀). C. V. Covell collection.

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